UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,150	02/02/2006	Yoko Hirohara	059277-0126	2078

22428 7590 05/22/2008
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
HASAN, MOHAMMED A	

ART UNIT	PAPER NUMBER
2873	

MAIL DATE	DELIVERY MODE
05/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,150	HIROHARA ET AL.	
	Examiner	**Art Unit**	
	Mohammed Hasan	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-45_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-23 and 28-45_ is/are rejected.

7)☒ Claim(s) _24-27_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _24 March 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt of acknowledged of papers submitted under 35 U.S.C. 119 (a) – (d), which papers have placed in the file.

Oath/Declaration

2. Oath and declaration filed on 2/2/06 is accepted.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-23 and 28-45 are rejected under 35 U.S.C. 102 (e) as being anticipated by Yamaguchi et al (7,281,797 B2).

Regarding claim 1, Yamaguchi et al (refer to figures 1-8) an eye-characteristics measurement apparatus comprising: a first light-source section (17) for emitting a light beam having a first wavelength; a first illumination optical system for illuminating a minute area on the retina of an eye under measurement, with a light beam emitted from the first light-source section; a compensation optical section (70) for compensating for

aberration of a light beam transmitted or reflected, according to the amount of compensation given based on an optical characteristic of a reflected light beam which is reflected and returned from the retina of the eye under measurement; a first light-receiving optical system (13) for receiving a part of the reflected light beam which is reflected and returned from the retina of the eye under measurement, through the compensation optical section and a first conversion member having a long focal length or a high sensitivity for converting to at least substantially 17 beams; a first light-receiving section (12) for receiving a light beam received by the first light-receiving optical system; a third light-source (51) section for illuminating the compensation optical section with a light beam having a third wavelength; a third light-receiving optical system for receiving a light beam emitted from the third light-source section, through the compensation optical section and a third conversion member for converting to at least substantially 17 beams; beam received by the third light-receiving optical system; a second light-receiving optical system for receiving a part of the reflected light beam which is reflected and returned from the retina of the eye under measurement, through the compensation optical section and a second conversion member having a short focal length, a low sensitivity, or a high density for converting to at least substantially 17 beams; a second light-receiving section (31) for receiving a light beam received by the second light-receiving optical system; a compensation-amount calculation section (14-1) for obtaining an optical characteristic of the eye under measurement based on the output of the second light-receiving section, for obtaining the amount of compensation based on the optical characteristic, and for outputting the

amount of compensation to the compensation optical section; and a measurement calculation section (60) for measuring an optical characteristic compensated by the compensation optical section based on the output of the third light-receiving section and an optical characteristic based on the output of the first light-receiving section, obtained after the compensation of the compensation optical section, and for obtaining an optical characteristic of the eye under measurement according to the measured optical characteristics (column 4, lines 30-67,column 6, lines 45-60,column 8, lines 1-10).

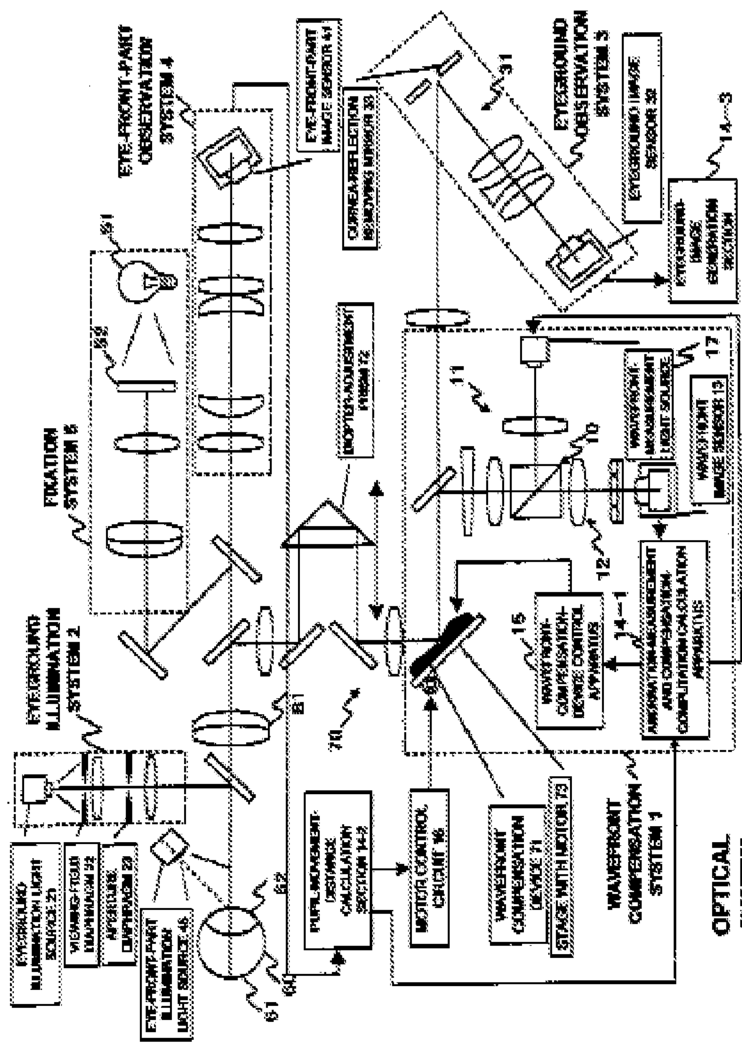


FIG. 1

Regarding claim 2, Yamaguchi et al discloses (refer to figures 1-8) an eye-characteristics measurement apparatus comprising: a first light-source (17) section for emitting a light beam having a first wavelength; a first illumination optical system for illuminating a minute area on the retina of an eye under measurement, with a light beam emitted from the first light-source section; a compensation optical section (70) for compensating for aberration of a light beam transmitted or reflected, according to the amount of compensation given based on an optical characteristic of a reflected light beam which is reflected and returned from the retina of the eye under measurement; a third light-source section (51) for illuminating the compensation optical section with a light beam having a third wavelength; a first light-receiving optical system (12) for receiving a part of the reflected light beam which is reflected and returned from the retina of the eye under measurement and the light beam emitted from the third light-source section, through the compensation optical section and a first conversion member having a long focal length or a high sensitivity for converting to at least substantially 17 beams; a first light-receiving section for receiving a light beam received by the first light-receiving optical system; a second light-receiving optical system for receiving a part of the reflected light beam which is reflected and returned from the retina of the eye under measurement, through the compensation optical section and a second conversion member having a short focal length, a low sensitivity, or a high density for converting to at least substantially 17 beams; a second light-receiving section (31) for receiving a light beam received by the second light-receiving optical system; a compensation-amount calculation section for obtaining an optical

characteristic of the eye under measurement based on the output of the second light-receiving section, for obtaining the amount of compensation based on the optical characteristic, and for outputting the amount of compensation to the compensation optical section; and a measurement calculation section for measuring an optical characteristic compensated by the compensation optical section based on the output of the first light-receiving section caused by the light beam emitted from the third light-source section, for measuring an optical characteristic obtained after the compensation of the compensation optical section based on the output of the first light-receiving section caused by the light beam emitted from the first light- source section, and for obtaining an optical characteristic of the eye under measurement according to the measured optical characteristics (column 4, lines 30-67,column 6, lines 45-60,column 8, lines 1-10) .

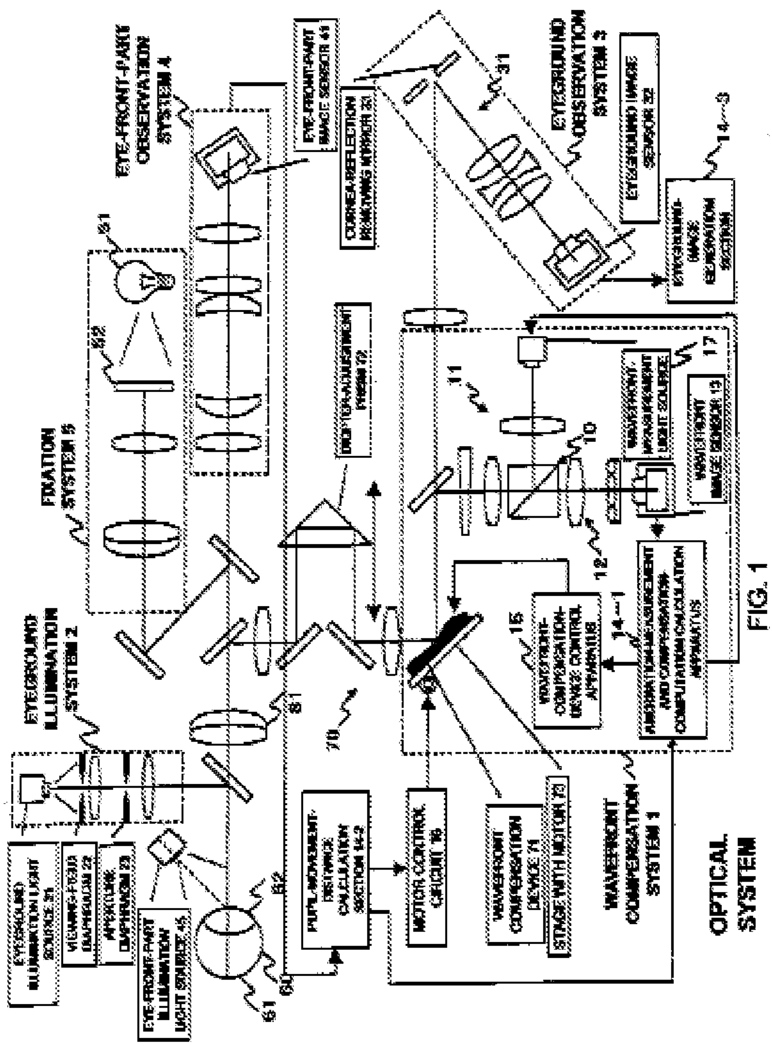


FIG. 1

Regarding claim 3, Yamaguchi et al discloses (refer to figures 1-8) an eye-characteristics measurement apparatus comprising: a first light-source section (17) for emitting a light beam having a first wavelength; a first illumination optical system for illuminating a minute area on the retina of an eye under measurement, with a

light beam emitted from the first light-source section; a first light-receiving optical system (12) for receiving a part of a reflected light beam which is reflected and returned

from the retina of the eye under measurement, through a first conversion member having a long focal length or a high sensitivity for converting to at least substantially 17 beams; a second light-receiving optical system (31) for receiving a part of the reflected light beam which is reflected and returned from the retina of the eye under measurement, through 30 a second conversion member having a short focal length, a low sensitivity, or a high density for converting to at least substantially 17 beams; a first light-receiving section for receiving a light beam received by the first light-receiving optical system; a second light-receiving section (31) for receiving a light beam received by the second light-receiving optical system; a compensation-amount calculation section (14-1) for obtaining an optical characteristic of the eye under measurement based on the output of the first light-receiving section and/or the second light-receiving section, and for obtaining and outputting the amount of compensation required to cancel aberration based on the optical characteristic;

a compensation optical section for applying aberration compensation based on the amount of compensation output from the compensation-amount calculation section to the reflected light beam from the retina of the eye under measurement, or to both an illumination light beam coming from the first illumination optical system and the reflected light beam from the retina of the eye under measurement; and a measurement calculation section for obtaining an optical characteristic of the eye under measurement according to an optical characteristic based on the output of the first light-receiving section and/or the second light-receiving section, obtained after the compensation of the compensation optical section, and an optical characteristic

compensated by the compensation optical section (60) (column 4, lines 30-67,column 6, lines 45-60,column 8, lines 1-10) .

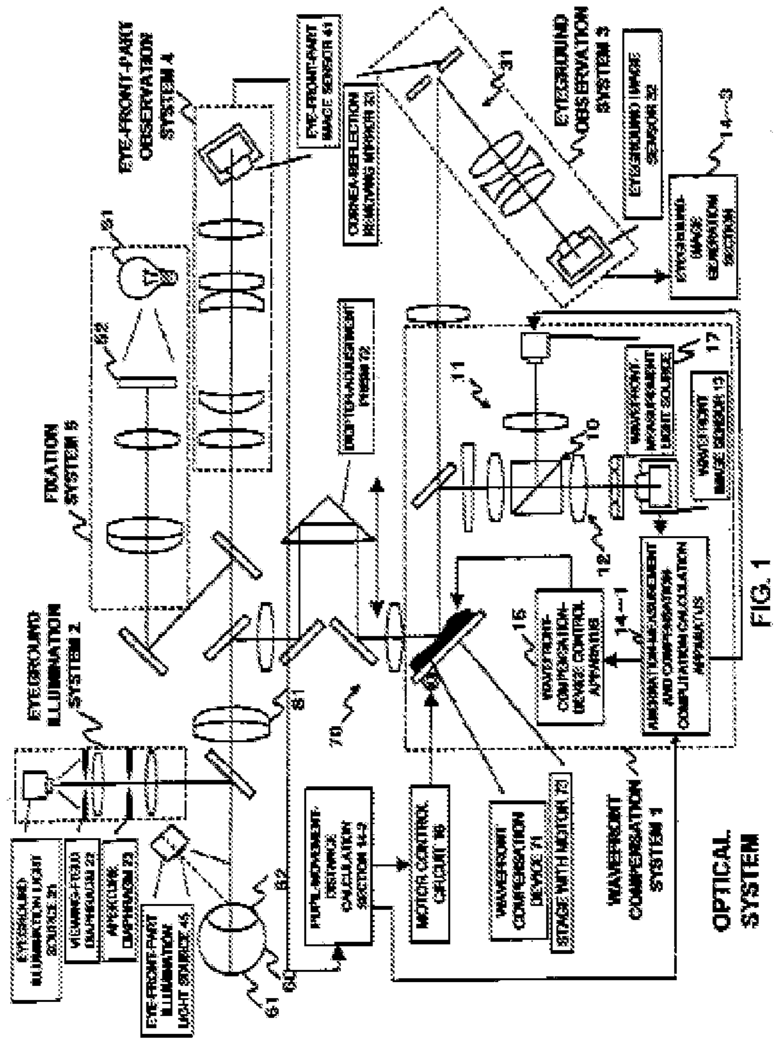


FIG. 1

.

Regarding claim 4,Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the second light-receiving optical system is configured so as to be able to perform signal processing more easily and quickly due to a setting in which the change of a beam converted by the second conversion member over a measurement possible area is set smaller than the conversion pitch of the second conversion member (as shown in figure 1).

Regarding claim 5, Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the compensation-amount calculation section (14-1) obtains the optical characteristic of the eye under measurement based on the output of the second light-receiving section (31) , and obtains and outputs the amount of compensation required to cancel aberration based on the optical characteristic, and

the measurement calculation section is configured so as to obtain the optical characteristic of the eye under measurement at a high sensitivity based on the optical characteristic based on the output of the first light- receiving section and the optical characteristic compensated by the compensation optical section (as shown in figures 1-8).

Regarding claim 6,Yamaguchi et al discloses an eye-characteristics measurement apparatus , further comprising: a third light-source section (51) for emitting a light beam to illuminate the compensation optical section; a third light-receiving optical system for receiving a light beam emitted from the third light-source section, through the compensation optical section and a third conversion member for converting to at least substantially 17 beams; a third light-receiving section for receiving a light beam

received by the third light-receiving optical system, wherein the measurement calculation section is configured so as to measure the optical characteristic compensated by the compensation optical section, based on the output of the third light-receiving section and to obtain the optical characteristic of the eye under measurement by using the measured optical characteristic (as shown in figures 1-8).

Regarding claim 7, Yamaguchi et al discloses, an eye-characteristics measurement apparatus , wherein the wavelength of a light beam emitted from the third light-source section (51) is different from the first wavelength of the first light-source section, and the measurement calculation section is configured so as to measure in parallel the optical characteristic based on the output of the first light-receiving section (17) , obtained after the compensation of the compensation optical section and the optical characteristic compensated by the compensation optical section based on the output of the third light-receiving section (as shown in figures 1-8).

Regarding claim 8, Yamaguchi et al discloses an eye-characteristics measurement apparatus , further comprising a third light-source section for emitting a light beam to illuminate the compensation optical section, wherein the first light-receiving section (13) further receives a light beam emitted from the third light-source section, through the compensation optical section and the first conversion member, and

the measurement calculation section is configured so as to measure the optical characteristic compensated by the compensation optical section, based on the output of the first light-receiving section caused by a light beam emitted from the third light-source

section, and to use the measured optical characteristic to obtain the optical characteristic of the eye under measurement (as shown in figures 1-8).

Regarding claim 9, Yamaguchi et al discloses an eye-characteristics measurement apparatus, wherein the measurement calculation section turns on and off the first and third light-source sections or inserts light-beam blocking means in an optical path coming from the first and third light-source section to switch or select the light beam to be received by the first light- receiving section (as shown in figures 1-8) .

Regarding claim I0, Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the third light-source section (51) is formed of a light source common with the first light-source section, and a part of a light beam emitted from the first light- source section is used as a light beam emitted from the third light-source section (as shown in figures 8).

Regarding claim 11, Yamaguchi et al discloses (refer to figures 1-8) an eye-characteristics measurement apparatus comprising: a first light-source section (17) for emitting a light beam having a first wavelength; a first illumination optical system for illuminating a minute area on the retina of an eye under measurement, with a light beam emitted from the first light-source section; a first light-receiving optical system (12) for receiving a part of a reflected light beam which is reflected and returned from the retina of the eye under measurement, through a first conversion member for converting to at least substantially 17 beams ; a first light-receiving section (12) for

receiving a light beam received by the first light-receiving optical system; a second light-source section for emitting a light beam having a second wavelength; an eye-front-part illumination section for illuminating a portion close to the retina of the eye under measurement at a predetermined pattern with a light beam emitted from the second light-source section; an .eye-front-part observation section for receiving a reflected light beam which is reflected and returned from the portion close to the retina of the eye under measurement; an eye-front-part-image light-receiving section for receiving a light beam received by the eye-front-part observation section; a compensation-amount calculation section (14-1) for obtaining an optical characteristic of the eye under measurement based on the output of the eye-front-part-image light-receiving section, and for obtaining and outputting the amount of compensation required to cancel aberration based on the optical characteristic; a compensation optical section for applying aberration compensation based on the amount of compensation output from the compensation-amount calculation section to the reflected light beam from the retina of the eye under measurement, or to both an illumination light beam coming from the first illumination optical system and the reflected light beam from ~0 the retina of the eye under measurement; and a measurement calculation section (60) for obtaining an optical characteristic of the eye under measurement according to an optical characteristic based on the output of the first light-receiving section, obtained after the compensation of the compensation optical section, and an optical characteristic compensated by the compensation optical section (column 4, lines 30-67,column 6, lines 45-60,column 8, lines 1-10).

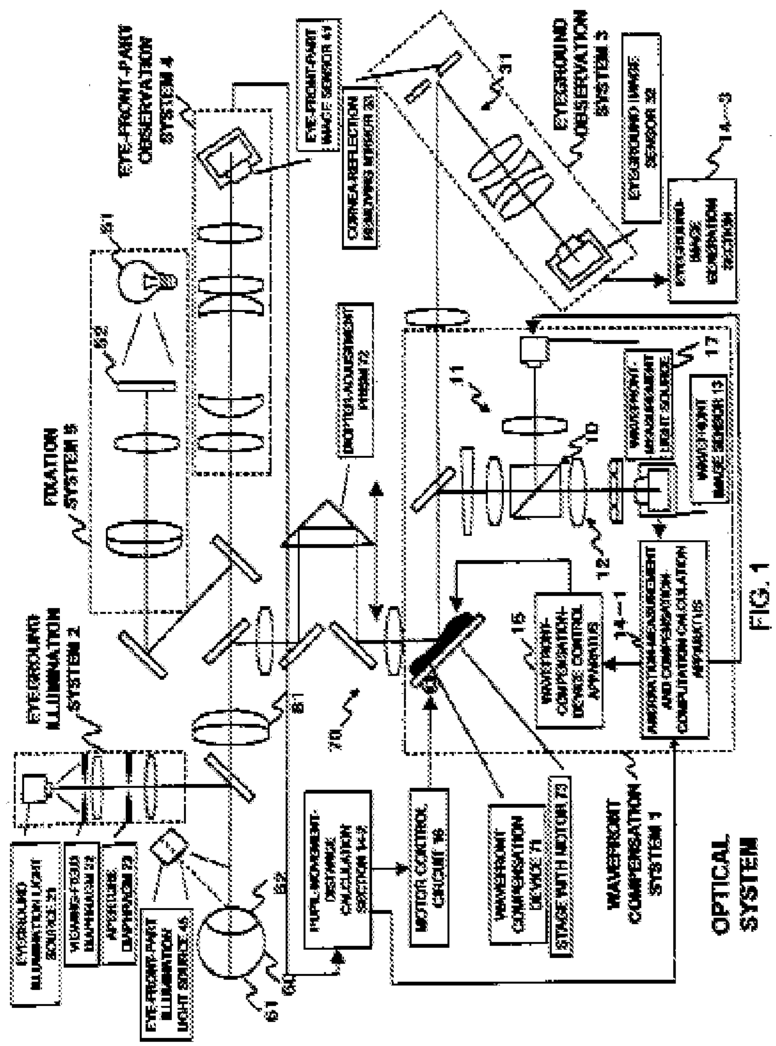


FIG. 1

Regarding claim 12 Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the measurement calculation section is configured so as to further obtain the shape of the cornea of the eye under measurement based on the output of the eye- front-part-image light receiving section (as shown in figures 1-8).

Regarding claim 13 Yamaguchi et al discloses an eye-characteristics measurement apparatus , further comprising: a third light-source section (51) for emitting a light beam to illuminate the compensation optical section;

a third light-receiving optical system for receiving a light beam emitted from the third light-source section, through the compensation optical section and a third conversion member for converting to at least substantially 17 beams; and

a third light-receiving section for receiving a light beam received by the third light-receiving optical system, wherein the measurement calculation section is configured so as to measure the optical characteristic compensated by the compensation optical section, based on the output of the third light-receiving section and to obtain the optical characteristic of the eye under measurement by using the measured optical characteristic (as shown in figure 8).

Regarding claim 14 Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the wavelength of a light beam emitted from the third light-source section is different from the first wavelength of the first light-source section, and the measurement calculation section is configured so as to measure in parallel the optical characteristic based on the output of the first light-receiving section, obtained after the compensation of the compensation optical section and the optical characteristic compensated by the compensation optical section based on the output of the third light-receiving section (as shown in figure 8).

Regarding claim 15, Yamaguchi et al discloses an eye-characteristics measurement apparatus, further comprising a third light-source section for emitting a light beam to illuminate the compensation optical section, wherein the first light-receiving section further receives a light beam emitted from the third light-source section, through the compensation optical section and the first conversion member, and the measurement calculation section is configured so as to measure the optical characteristic compensated by the compensation optical section, based on the output of the first light-receiving section (12) caused by a light beam emitted from the third light-source section, and to use the measured optical characteristic to obtain the optical characteristic of the eye under measurement (as shown in figures 1-8).

Regarding claim 16, Yamaguchi et al discloses an eye-characteristics measurement , wherein the measurement calculation section turns on and off the first and third light-source sections or inserts light-beam blocking means in an optical path coming from the first and third light-source sections to switch the light beam to be received by the first light-receiving section (as shown in figure 1).

Regarding claim 17, Yamaguchi et al discloses an eye-characteristics measurement apparatus, wherein the third light-source section (51) is formed of a light source common with the first light-source section, and a part of a light beam emitted from the first light- source section is used as a light beam emitted from the third light-source section (column 8 lines 5-10).

Regarding claim 18, Yamaguchi et al discloses (refer to figures 1-8) an eye-characteristics measurement apparatus comprising: a first light-source section (17) for emitting a light beam having a first wavelength; a first illumination optical system for illuminating a minute area on the retina of an eye under measurement, with a light beam emitted from the first light-source section; a first light-receiving optical system (12) for receiving a part of a reflected light beam which is reflected and returned from the retina of the eye under measurement, through a first conversion member having a long focal length or a high sensitivity for converting to at least substantially 17 beams; a second light-receiving optical system (31) for receiving a part of the reflected light beam which is reflected and returned from the retina of the eye under measurement, through 30 a second conversion member having a short focal length, a low sensitivity, or a high density for converting to at least substantially 17 beams; a first light-receiving section for receiving a light beam received by the first light-receiving optical system; a second light-receiving section (31) for receiving a light beam received by the second light-receiving optical system; a compensation-amount calculation section (14-1) for obtaining an optical characteristic of the eye under measurement based on the output of the first light-receiving section and/or the second light-receiving section, and for obtaining and outputting the amount of compensation required to cancel aberration based on the optical characteristic;

a compensation optical section for applying aberration compensation based on the amount of compensation output from the compensation-amount calculation section

to the reflected light beam from the retina of the eye under measurement, or to both an illumination light beam coming from the first illumination optical system and the reflected light beam from the retina of the eye under measurement; and a measurement calculation section for obtaining an optical characteristic of the eye under measurement according to an optical characteristic based on the output of the first light-receiving section and/or the second light-receiving section, obtained after the compensation of the compensation optical section, and an optical characteristic compensated by the compensation optical section (60) (column 4, lines 30-67,column 6, lines 45-60,column 8, lines 1-10) .

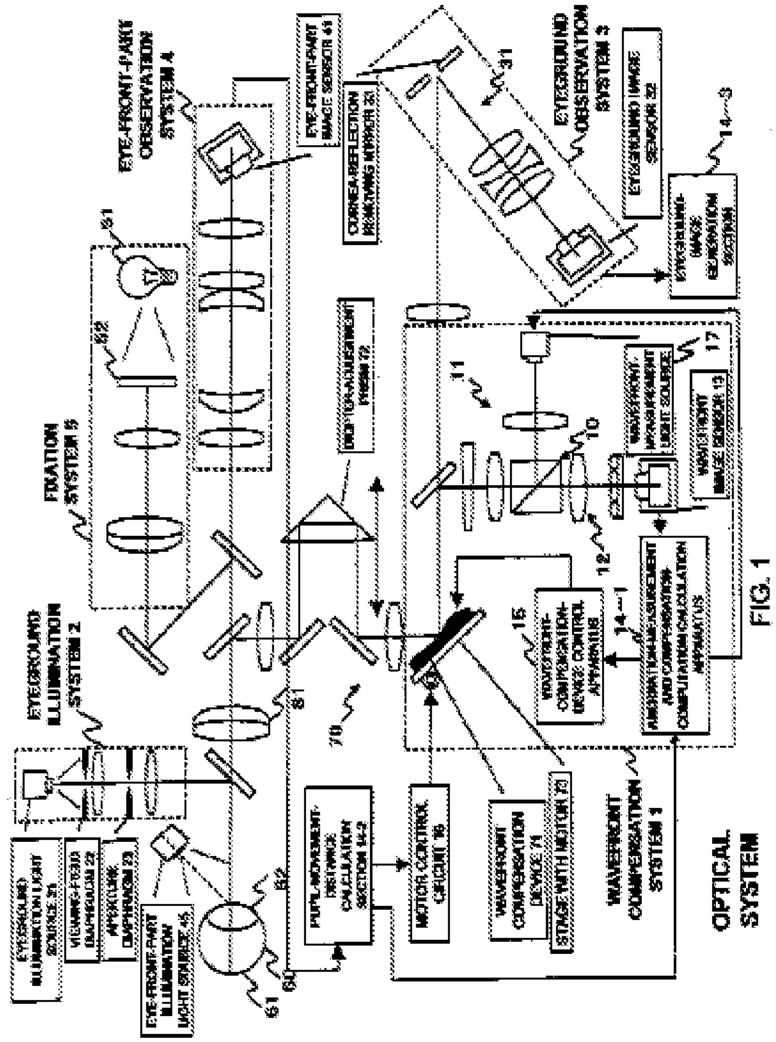


FIG. 1

Regarding claim 19, Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the wavelength of a light beam emitted from the third light-source section is different from the first wavelength of the first light-source section, and the measurement calculation section is configured so as to measure in parallel the optical characteristic based on the output of the first light-receiving section,

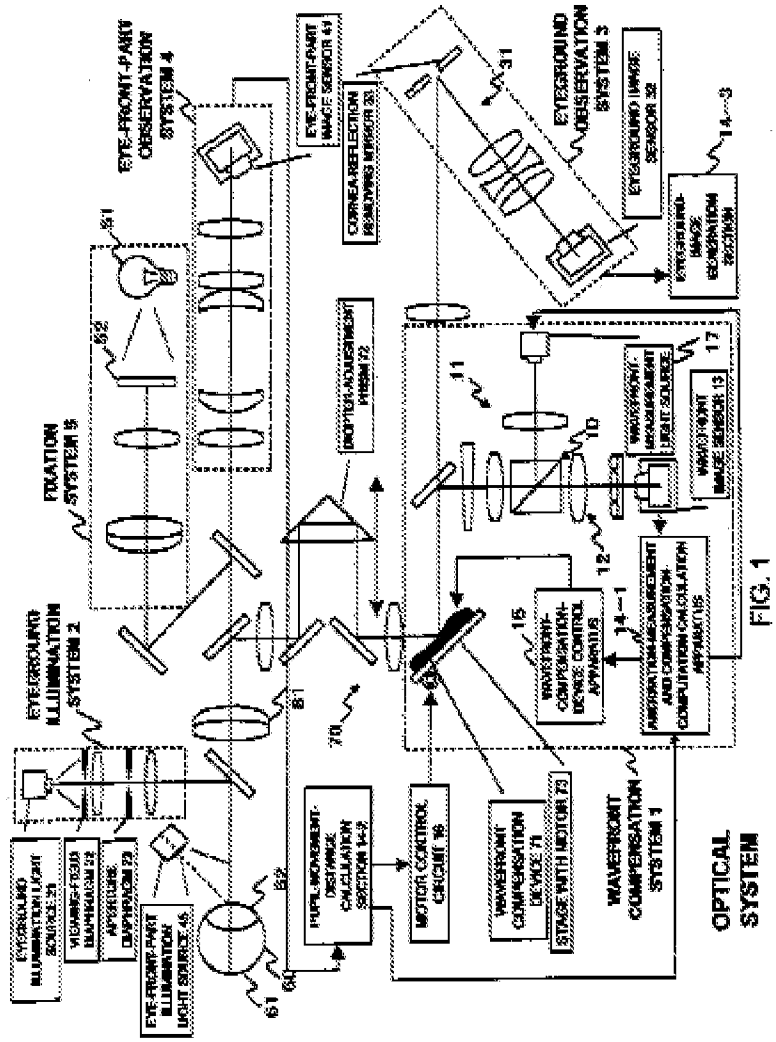
obtained after the compensation of the compensation optical section and the optical characteristic compensated by the compensation optical section based on the output of the third light-receiving section.

Regarding claim 20, Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the third light-source section is formed of a light source common with the first light-source section, and a part of a light beam emitted from the first light- source section is used as a light beam emitted from the third light-source section (as shown in figure 1) .

Regarding claim 21, Yamaguchi et al discloses (refer to figures 1-8) an eye-characteristics measurement apparatus comprising: a first light-source section (17) for emitting a light beam having a first wavelength; a first illumination optical system for illuminating a minute area on the retina of an eye under measurement, with a light beam emitted from the first light-source section; a third light source (51) for emitting a light beam used for measuring aberration compensated for, a first light-receiving optical system (12) for receiving a part of a reflected light beam which is reflected and returned from the retina of the eye under measurement, through a first conversion member for converting to at least substantially 17 beams ; a first light-receiving section (12) for receiving a light beam received by the first light-receiving optical system; a second light-source section for emitting a light beam having a second wavelength; , a compensation-amount calculation section (14-1) for obtaining an optical characteristic of the eye under measurement based on the output of the eye-front-part-image light-receiving section, and for obtaining and outputting the amount of

compensation required to cancel aberration based on the optical characteristic; a compensation optical section for applying aberration compensation based on the amount of compensation output from the compensation-amount calculation section to the reflected light beam from the retina of the eye under measurement, or to both an illumination light beam coming from the first illumination optical system and the reflected light beam from the retina of the eye under measurement; and a measurement calculation section (60) for obtaining an

optical characteristic of the eye under measurement according to an optical characteristic based on the output of the first light-receiving section, obtained after the compensation of the compensation optical section, and an optical characteristic compensated by the compensation optical section (column 4, lines 30-67,column 6, lines 45-60,column 8, lines 1-10).



Regarding claim 22, Yamaguchi et al discloses wherein the measurement calculation section turns on and off the first and third light-source sections or inserts light-beam blocking means in an optical path coming from the first and third light-source sections to switch or select the light beam to be received by the first light-receiving section (as shown in figure 1).

Regarding claim 23, Yamaguchi et al discloses, wherein

the third light-source section is formed of a light source common with the first light-source section, and a part of a light beam emitted from the first light- source section is used as a light beam emitted from the third light-source section (as shown in figure 1).

Regarding claim 28, Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the compensation optical section is configured so as to perform compensation including at least a higher-order component of the optical characteristic of the eye under measurement (as shown in figure 1).

Regarding claim 29, Yamaguchi et al discloses an eye-characteristics measurement apparatus, wherein the compensation optical section is formed of at least either a liquid-crystal spatial optical modulator or a deformable mirror (as shown in figure 1).

Regarding claim 30, Yamaguchi et al discloses an eye-characteristics measurement apparatus wherein the optical characteristic of the eye under measurement is displayed after the Compensation of the compensation optical section, and aberration is further compensated for by the compensation-amount calculation section and the compensation optical section according to an instruction from an input section (as shown in figure 1).

Regarding claim 31, Yamaguchi et al discloses an eye-characteristics measurement apparatus , wherein the compensation-amount calculation section is configured so as to obtain the amount of compensation such that the obtained optical

characteristic of the eye under measurement is not completely canceled (as shown in figure 1).

Regarding claim 32, Yamaguchi et al discloses, wherein the first illumination optical system is configured so as to illuminate the minute area on the retina of the eye under measurement with a wide beam when passing through the cornea of the eye under measurement by a light beam emitted from the first light-source section (as shown in figure s1-8).

Regarding claim 33, Yamaguchi et al discloses, wherein the first illumination optical system is configured so as to illuminate the minute area on the retina of the eye under measurement with a narrow beam by a light beam emitted from the first light-source section (as shown in figures 1-8).

Regarding claim 34, Yamaguchi et al discloses, wherein the first illumination optical system comprises a light-beam incident-position change section capable of changing the position where the narrow beam for illumination is incident on an eye-front-part of the eye under measurement, in a direction perpendicular to the optical axis (as shown in figures 1-8).

Regarding claim 35, Yamaguchi et al discloses, a first compensation optical section for applying aberration compensation to an illumination light beam coming from the first illumination optical system, and a second compensation optical section for applying aberration compensation to the reflection light beam from the retina of the eye under measurement (as shown in figures 1-8).

Regarding claim 36, Yamaguchi et al discloses , further comprising: a fourth light-receiving optical system for receiving a part of a light beam emitted from the first light-source section, through the first compensation optical section and a fourth conversion member for converting to at least substantially 17 beams; and a fourth light-receiving section for receiving a light beam received by the fourth light- receiving optical system, wherein the third light-source section illuminates the second compensation optical section; the third light-receiving section receives a light beam emitted from the third light- source section, through the second compensation optical section and the third conversion member; and the measurement calculation section is configured so as to further measure the optical characteristic compensated by the second compensation optical section based on the output of the third light-receiving section and to use the measured optical characteristic to obtain the optical characteristic of the eye under measurement (as shown in figures 1-8).

Regarding claim 37, Yamaguchi et al discloses, wherein the compensation-amount calculation section is configured so as to be able to compensate for a spherical-power component, which is a lower-order aberration, based on the optical characteristic of the eye under measurement by moving the first illumination optical system and/or the first light-receiving optical system (as shown in figures 1-8).

Regarding claim 38, Yamaguchi et al discloses , wherein the compensation-amount calculation section is configured such that a spherical-power component and/or an astigmatic component, which are lower-order aberrations, is a first compensation

optical section for applying aberration compensation to an illumination light beam coming from the first illumination optical system, and a second compensation optical section for applying aberration compensation to the reflection light beam from the retina of the eye under measurement (as shown in figures 1-8).

Regarding claim 39, Yamaguchi et al discloses, wherein the compensation optical section is configured so as to perform compensation including at least a higher-order component of the optical characteristic of the eye under measurement (as shown in figure 1-8).

Regarding claim 40, Yamaguchi et al discloses, wherein the compensation optical section is formed of at least either a liquid-crystal spatial optical modulator or a deformable mirror (as shown in figure 1).

Regarding claim 41, Yamaguchi et al discloses , wherein the optical characteristic of the eye under measurement is displayed after the compensation of the compensation optical section, and aberration is further compensated for by the compensation-amount calculation section and the compensation optical section according to an instruction from an input section (as shown in figure 1).

Regarding claim 42, Yamaguchi et al discloses, wherein the compensation-amount calculation section is configured so as to obtain the amount of compensation such that the obtained optical characteristic of the eye under measurement is not completely canceled (as shown in figure 1).

Regarding claim 43, Yamaguchi et al discloses, wherein the first illumination optical system is configured so as to illuminate the minute area on the retina of the eye under measurement with a wide beam when passing through the cornea of the eye under measurement by a light beam emitted from the first light-source section (as shown in figure 1).

Regarding claim 44, Yamaguchi et al discloses , wherein the first illumination optical system is configured so as to illuminate the minute area on the retina of the eye under measurement with a narrow beam by a light beam emitted from the first light-source section (as shown in figure 1).

Regarding claim 45, Yamaguchi et al discloses , wherein the first illumination optical system comprises a light-beam incident-position change section capable of changing the position where the narrow beam for illumination is incident on an eye-front-part of the eye under measurement, in a direction perpendicular to the optical axis (as shown in figure 1).

Allowable Subject Matter

4. Claims 24,25,26,27, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show an eye-characteristics measurement apparatus, wherein the compensation optical section comprises a first compensation optical section for applying aberration compensation to an illumination light beam coming from the first illumination optical system, and a second compensation optical section for applying aberration compensation to the reflection light beam from the retina of the eye under measurement and wherein the compensation-amount calculation section is configured so as to be able to compensate for a spherical-power component, which is a lower-order aberration, based on the optical characteristic of the eye under measurement by moving the first illumination optical system and/or the first light-receiving optical system and wherein the compensation-amount calculation section is configured such that a spherical-power component and/or an astigmatic component, which are lower- order aberrations, is compensated for by moving the first light-receiving optical system and/or changing the state of a part of the elements of the first light-receiving optical system, and the compensation optical section performs compensation including at least a higher-order component of the other optical characteristics.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art Mihashi et al (7,249,852) discloses an eye characteristic measuring apparatus.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L Mack can be reached on (571) 272- 2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mohammed Hasan/
Primary Examiner, Art Unit 2873
5/20/2008